

TRIPURA



GAZETTE

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**PART--I-- Orders and Notifications by the Government of Tripura,
The High Court, Government Treasury etc.**

**GOVERNMENT OF TRIPURA
ELECTION DEPARTMENT**

No.F.1(2)-CEO/ESTT/P&AP/2021/11884

Dated, Agartala, the 21st October, 2024.

NOTIFICATION

In exercise of the power conferred by the proviso to Article 309 of the Constitution of India, the Governor of Tripura in consultation with the Tripura Public Service Commission is hereby pleased to make the following rules regulating the method of recruitment to the post of **Assistant Programmer** under the Election Department, Government of Tripura, namely:-

1. **Short title and commencement:-**

- (a) These rules may be called "**Recruitment Rules, 2024**" for the post of **Assistant Programmer** under the Election Department, Government of Tripura.
- (b) These shall come into force on the date of the publication in the Official Gazette.

2. The name of the post(s) shall be specified in Column – 1 of the schedule annexed hereto.

3. **Number, classification and scale of pay:-**

The number of the said post, its classification and the scale of pay attached thereto shall be as specified in Column 2 to 4 of the Schedule annexed hereto.

4. **Method of recruitment, age limit, qualification etc.:-**

The method of recruitment to the said post, age limit, qualifications and other matters relating to the said post shall be as specified in columns 5 to 13 of the said schedule.

5. **Disqualification:-** No person

- (a) Who has entered into or contracted a marriage with a person having spouse living:
OR

- (b) Who, having a spouse living, has entered into or contracted a marriage with any person.

Provided that the State Government may, if satisfied that such marriage is permissible under the personal law applicable to such person and the other party to the marriage and that there are other grounds for so doing, exempt any person from the operation of this rules.

6. **Power to relax:-**

Where the State Government is of the opinion that it is necessary or expedient to do so, it may be order, for reasons to be recorded in writing and in consultation with the Tripura Public Service Commission, may relax any of the provisions of these rules with respect to any class or category of persons.

7. **Repeal and Saving:-**

The Recruitment Rules for the aforementioned post existing in this Department are hereby repealed with immediate effect and are replaced by this Recruitment Rules.

8. **Saving:-**

Nothing in these rules shall effect reservations, relaxation of age limit and other concessions required to be provided for the Scheduled Castes, the Scheduled Tribes, Ex-serviceman and other special categories of persons in accordance with the orders issued by the State Government from time to time in this regard.

9. This Notification is issued as per Notification No.F.20(1)-GA(P&T)/18 dated 17th February, 2021 issued by the Government in the GA(P&T) Department.

By order of the Governor,

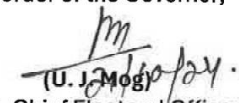

(U.J. Moeg)
Addl. Chief Electoral Officer
Government of Tripura

SCHEDULE

RECRUITMENT RULES FOR THE POST OF ASSISTANT PROGRAMMER UNDER THE ELECTION DEPARTMENT, GOVERNMENT OF TRIPURA

1	Name of Post(s)	Assistant Programmer
2	No. of post(s)	2 (two) plus additional post(s) as and when created by the Government
3	Classification	Group-'C', Non Gazetted
4	Scale of pay	Rs.34,700/-(PB-2, Rs.5700 -24000/-, Cell-1, Level-10) as per Tripura State Pay Matrix-2018 (subject to revision by the Government from time to time)
5	Method of recruitment whether by direct recruitment or by promotion or by deputation/ transfer and percentage of the vacancies to be filled by various methods	(a) By direct recruitment through TPSC Examination as per provision of Revised Recruitment Policy vide No.20(1)-GA(P&T)/18 dated 29.10.2020 (b) Interview /Viva voce shall be not exceeding 15% of the Total Marks (c) Syllabus: - Enclosed at Annexure-I. (and as revised by the Government from time to time)
6	Age limit for direct recruitment	18-40 years. Upper age limit is relaxable by 5(five) years for ST/SC/PwDs(PH)/ Government Employee candidates
7	Educational and other qualifications required for direct recruitment	Essential : At least Bachelor in Computer Application (BCA)/B.Sc.(Computer Science)/B.Sc. (Information Technology) or Diploma in Computer Engineering or higher Desirable Qualification: (i) Knowledge in VB .NET, ASP .NET, C#, JAVA/ J2EE programming along with handling MS-SQL Server, Oracle, MySQL database (ii) Knowledge of Bengali or Kokborok
8	Whether age and educational qualification prescribed for direct recruitment will apply in case of promotes	Not applicable
9	Whether Selection Post or Non-Selection Post	Selection Post
10	Period of probation, if any	2 (two) years
11	In case of recruitment by promotion/deputation/ transfer, grades from which promotion/ deputation/ transfer is to be made.	Not applicable
12	If a D.P.C. exists, what is its composition	Not applicable
13	Circumstances in which TPSC is to be consulted in making recruitment.	As required under the Tripura Public Service Commission (Exemption from Consultation) Regulations, 1973.
14	Repeal	The existing Recruitment Rules for the post of Programmer notified vide No.F.1(2)-CEO/ESTT/2013(L)/ 9108-9112 dated 15 th October, 2015 and all earlier subsequent amendments in this regard are hereby repealed.

By order of the Governor,


 (U. J. Moir)
 Addl. Chief Electoral Officer
 Government of Tripura

SYLLABUS & SELECTION PROCEDURE

SCHEME OF EXAMINATION FOR DIRECT RECRUITMENT TO THE POST OF ASSISTANT PROGRAMMER, GROUP- 'C' NON GAZETTED UNDER ELECTION DEPARTMENT, GOVERNMENT OF TRIPURA

The Selection process consist of 2 (two) Successive stage

1. Written Examination
2. Interview/Personality Test

Sl.No	Written Exam		Marks	Duration
1.	General Ability Test Paper – I (MCQ)	English	15	180 Minutes (3 hours)
		General Mental Ability & Logical reasoning	15	
		GK & Current Affairs	20	
		Total	50	
	Job Oriented Subject Technical Paper-II	Job Oriented Subjects Technical Paper-II (MCQ)	120	
2.	Viva/Interview		30	
3.	Grand Total		200	

Details of the Syllabus:-

Sl. No.	Subjects	Syllabus		Marks
1.	General Ability Test Paper	English	English Composition will cover Synonyms, Antonyms, use of common Phrase & Idioms., use of appropriate Prepositions and Articles, Comprehension, Ordering of words in a sentence, Ordering of sentences, spotting of errors, use of appropriate and qualifying words. (OMR based MCQ Type - 15 Questions one mark each)	15
		General Mental Ability & Logical reasoning	Logical Reasoning, Analytical Reasoning Capabilities, Quantitative and Qualitative abilities, General Aptitude (OMR based MCQ Type - 15 Questions one mark each)	15
		General Knowledge & Current Affairs	(i) General Knowledge with special reference to Tripura and North Eastern States (ii) Elementary knowledge of Indian History and Indian Geography. (iii) Matter of common experience and current events and problems with special reference to Tripura, India and world. (OMR based MCQ Type & 20 Questions one mark each)	20
General Ability Test Paper - I				Total Marks = 50

2	Job Oriented Subject Technical Paper-II	<p>Computer Science and Information Technology</p> <p>Section 1: Computer Organization and Architecture</p> <p>Digital and Analog computers, CPU, Hardware, Software and firmware. Number Systems: Binary Numbers, Number Base conversions, Octal and Hexadecimal Numbers, Complements, Signed Binary Numbers, Binary Codes: BCD code, Gray Code, ASCII Code, Excess 3 Code, Error detecting Code. Computer Arithmetic, Logic gates, Integrated Circuits, K-Map, AND, OR, NAND and NOR implementations, Exclusive-OR function. Combinational Logic: Combinational Circuits, Binary adder, subtractor, multiplier, Decoders, Encoders, Multiplexes and Demultiplexers. Sequential circuits, Latches, Flip Flops: SR, D, JK, T. Master Slave JK Flip Flop. Characteristic equations and Excitation tables of flip-flops. Shift Registers, Counters. The memory unit, the input and output subsystem, the bus structures, ALU. Program development tools: Compiler, interpreter and assembler. 8085/86 micro processor architecture, Instruction set. Integer division. BCD arithmetic, Design of ALU. Memory address and addressing modes. RISC and CISC processors. Instruction pipelining, Parallel processing and pipelining, pipelining in RISC and CISC processors. Super scalar processors. VLIW processors. Cache memory and its types. Input Output organization, accessing I/O devices, Interrupts. Memory mapped I/O and I/O mapped I/O. Programmed I/O.</p> <p>Section 2: Programming in C</p> <p>Data types, Constants and Variables, Expressions and Operators and Decision Control Structures in C. Loop Control Structures, Case Control Structures. One dimensional and multidimensional array. Pointers and their Applications, String Handling Functions: Standard and User defined Function, Parameter passing, Scope Rule. Recursion, Structures and Union, Arguments to main, Enumerations and bit fields. Pre-Processors: {Def, include, macro's, ifdef etc.}, File Handling.</p> <p>Section 3: Object Oriented Programming through JAVA</p> <p>Features of Java, Object-oriented programming overview, Introduction of Java technologies, How to write simple Java Programs, Data Types, Variables, Memory concepts, decision making operators, Naming Conventions. Introduction to Class, Objects Methods and Instance Variables, Primitive type Vs Reference Type, Initializing Objects with Constructors. Static Method, Static field, String Handling in JAVA, Arrays, Using Command-line Arguments final Instance Variables, this reference, static import, overloaded Constructors, Garbage collection and method finalize. Overloading methods, parameter passing. Inheritance, Polymorphism, Packages and Interfaces, Exception Handling, Streams and Files. Multithreading, GUI in JAVA, Applets, Generic and Collection API, Database connectivity: JDBC</p>	120 Marks
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	<p>Section 4: Computer Networks</p> <p>Concept of layering: OSI and TCP/IP Protocol Stacks; Basics of packet, circuit and virtual circuit-switching; Data link layer: framing, error detection, Medium Access Control, Ethernet bridging; Routing protocols: shortest path, flooding, distance vector and link state routing; Fragmentation and IP addressing, IPv4, CIDR notation, Basics of IP support protocols (ARP, DHCP, ICMP), Network Address Translation (NAT); Transport layer: flow control and congestion control, UDP, TCP, sockets; Application layer protocols: DNS, SMTP, HTTP, FTP, Email.</p> <p>Section 5: Data Structures and algorithms</p> <p>Arrays, Stacks, Queues. Dequeues. Linked Lists, Singly and Doubly linked list, Trees: Definition, Tree types and their Implementation. Preorder post order, in order traversal, Hashing, Hash function, Collision Resolution Techniques, Hashing Applications, Standard Template Libraries, Time Complexity, Big- Oh- notation, Running Times, Best case, Worst case, Average Case Factors depends on running time, Introduction to Recursion, Divide and Conquer Algorithm, Evaluating time Complexity, Straight Sequential Search, Binary Search, Interpolation Search, Sorting: Introduction, Sorting by exchange, selection insertions. Bubble sort, Selection sort, Insertion sort, Efficiency of above algorithms, Merge sort, Quick sort Algorithm, Heap sort, Radix sort, Order Analysis: Objectives of time analysis of algorithms; Big-oh and Theta notations, Master Theorem and its proof, solution of divide and conquer recurrence relations, Dynamic Programming: methodology and examples. Graph Algorithms: Basics of graphs and their representations. BFS. DFS. Topological sorting. Minimum spanning trees (Kruskal and Prim's algorithms and disjoint set and Fibonacci heap data structures). Shortest Paths (Dijkstra, Bellman-Ford, Floyd- Warshall). Hard problems and approximation algorithms. Problems classes P, NP, NP-hard and NP complete, deterministic and nondeterministic polynomial-time algorithms. Approximation algorithms for some NP- complete problems. Backtracking, Branch and Bound technique, String Matching, Knave algorithms, KMP algorithm, Parallel Algorithms.</p> <p>Section 6: Software Engineering:</p> <p>System modeling, system engineering process, life cycle models, design and implementation, validation, evolution, automated, process support – software requirements, SRS, feasibility studies - elicitation and analysis - validation - management - system models, context models, behavior models, data models, object models, object-oriented design, design evolution, real-time software design, critical systems specifications - critical system development, software testing.</p>	
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		<p>Section 7: Database Technologies</p> <p>Various Views of data, data independence, schema & sub-schema, primary concept of data models, database languages, transaction management, database administrator & user, data dictionary, database architectures. ER model, Reduction of ER schema to tables, candidate, primary, alternate & foreign keys. EER model, Relational Algebra, SQL: DDL, DML, DCL Queries, Relational Database, Programming concepts of PL/SQL, Stored procedure, Database connectivity with ODBC/JDBC. SQL Extensions. Functional dependencies, Normalization, Database Integrity, Transaction Management, Concurrency & Recovery, Query Processing, Query optimization, File Organization: File organization, Organization of records in files, basic concept of Indexing, ordered indices: B+ tree & B tree index files. RAID. Fundamental of data mining, Data Mining Query Languages. Data Mining application Association Rule, clustering classification, Genetic Algorithm. Web Mining, Web content mining, Web Structure mining, Text mining, Temporal Data Mining, Spatial Data Mining. Data Warehouse, Warehouse Schema, Data Warehouse Architecture, Data Warehouse Server, Data Warehouse Implementation, Metadata, OLAP operations. Object Oriented Databases, Spatial Databases.</p> <p>Section 8: Operating System</p> <p>Evolution of operating systems, operating system concepts, Process Management: Concepts, Algorithms. Memory Management: Concepts, single user memory management. Partition memory allocation, Virtual memory management using paging and segmentation techniques.</p> <p>Concurrent Processes: Mutual exclusion and synchronization, Techniques of inter process communication, Deadlock handling.</p> <p>File Management: Operations on a file, structure of a file system, Free block list, keeping track of blocks allocated to a file, directory structure, sharing and protection of files, file system Reliability, Unix file system.</p> <p>Device Management: Goals of input/output software design, Structure of device hardware and software, Layers of I/O software, structure of device drivers, Disk driver, disk arm scheduling algorithms, terminal driver, clock driver etc.</p> <p>Introduction to network and distributed operating systems Case Studies: Unix/Linux, Windows operating system, Unix/Linux commands.</p>	
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		<p>Section 9: Web Technologies</p> <p>HTML : Introduction to HTML, Essential Tags, Tags and Attributes, Text Styles and Text Arrangements, Text, Effects, Exposure to Various Tags (DIV, MARQUEE, NOBR, DFN, HR, LISTING, Comment, IMG), Color and Background of Web Pages, Lists and their Types, Attributes of Image Tag, Hypertext, Hyperlink and Hypermedia, Links, Anchors and URLs, Links to External Documents, Different Section of a Page and Graphics, Footnote and eMailing, Creating Table, Frame, Form and Style Sheet</p> <p>DHTML : Document Object Model, Features of DHTML, CSSP (Cascading Style Sheet Positioning) and JSSS (JavaScript assisted Style Sheet), Layers of Netscape, The ID Attribute, DHTML Events.</p> <p>Java Script: Objects, Methods, Events and Functions, Tags, Operators, Data Types, Literals and Type Casting in JavaScript, Programming Construct, Array and Dialog Boxes, Relating JavaScript to DHTML, Dynamically Changing Text, Style, Content.</p> <p>Introduction to PHP: Server Side Programming, Introduction to PHP, Basic Programming Concepts of PHP: Variables, Data-types, Constants, Scope of Variables, Type of Variables, Type Casting, Operators, Operators Precedence, References, Arrays; Control Structures: Branching, If statement, Switch statement; Looping: for Loop, while Loop, do while Loop, for each Loop; Functions: User Defined Functions, Built-in Function, Functions for Variables; Script Controlling Functions, Array Functions, Date and Time Functions, Mathematical Functions, String Functions, PHP Server Variables; Working with form, Uploading files to Web Server using PHP</p> <p>(OMR based MCQ Type & 120 Questions one mark each)</p>	
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- (i) Question paper for written examination will be of 170 marks (170 MCQ). Question will be MCQ type carrying 1(one) mark each.
- (ii) There will be negative marking of 0.25 mark for every wrong answer.
- (iii) Minimum qualification marks in MCQ test should be as per standing norms of TPSC.
- (iv) Accordingly, merit list of qualified candidates may be prepared considering 100 points roster as per the standing norms of Government of Tripura.
- (v) Each question will have 4(four) distracters. Some of the questions may have "None of these" as one of the distracters if felt necessary.
- (vi) Candidates must appear before the Selection Committee for interview/personality test.
- (vii) Final merit list will be prepared by adding both marks obtained in the written test followed by interview.
- (viii) Out of 30 marks allocated for interview, some marks to be allocated for Desirable Qualification as per Memorandum vide No.F.20(1)/GA(P&T)/2018 dated, 02/01/2021 issued by the Govt. of Tripura.


 (U.J. Mog)
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